

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

**Ex parte** MUHAMMED IBRAHIM SEZAN and REGIS J. CROCKETT

Appeal No. 2004-2058  
Application No. 09/298,282

ON BRIEF

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BOARD OF PATENT APPEALS  
AND INTERFERENCES

Before BARRETT, BLANKENSHIP, and MACDONALD, **Administrative Patent Judges.**

MACDONALD, **Administrative Patent Judge.**

**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 1-12 and 14. Claim 13 has been canceled.

**Invention**

Appellants' invention relates to a system for providing a thin data broadcast service for digital television. The system includes a data service-authoring module, in which program descriptions are developed for each audiovisual program. The descriptions could be developed by programming personnel who fill in the necessary information for the data service modules, an

automated visual indexing and referencing system, or a combination of the two. The descriptions are encoded with any other available information and sent to a multiplexer. The multiplexer then converts that data service information into a data transport stream, such as an MPEG-2 transport stream. Another aspect of the invention is a receiver that includes the capability to take the MPEG-2 transport stream with the encoded data service and convert it into program summaries or to filter the audiovisual program on-line. The receiver takes the references sent along with audiovisual program and uses them to extract the associated key clips from the audiovisual program and to build the summary for the viewer. Appellants' specification at page 3, lines 2-16.

Claim 1 is representative of the claimed invention and is reproduced as follows:

1. A system for providing a digital television data broadcast service, comprising:

a data service authoring subsystem operable to receive an audiovisual program and to author key clips, wherein key clips are comprised of one of either at least one key event or at least one key object, and provide key clip data in a defined format identifying the key clips of the audiovisual program

a data service encoder operable to receive said key clip data and Program and System Information Protocol data, wherein key clip data includes descriptors that directly correspond to descriptions in the Program and System Information Protocol data, and finalize contents of said data broadcast service; and

Appeal No. 2004-2058  
Application No. 09/298,282

an MPEG-2 system multiplexer operable to multiplex said contents of said data broadcast service with encoded audiovisual programs and produce a MPEG-2 transport stream to be broadcast to at least one client receiver in a format that allows customization at the receiver.

### **References**

The references relied on by the Examiner are as follows:

Barton et al. (Barton)	6,233,389	May 15, 2001 (Filed Jul. 30, 1998)
Sezan et al. (Sezan)	6,236,395	May 22, 2001 (Filed Apr. 26, 1999)
Srinivasan et al. (Srinivasan)	6,357,042	Mar. 12, 2002 (Filed Jan. 22, 1999)

Hanjalic et al. (Hanjalic), "Automation of systems enabling search on stored video data," SPIE/IS&T Electronic Imaging, Vol. 3022, pp. 427-438 (1997).

### **Rejections At Issue**

Claims 1-7 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Srinivasan and Hanjalic and Sezan.

Claims 8-11 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Sezan and Hanjalic and Barton.

Claims 12 and 14 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Sezan and Hanjalic.

Appeal No. 2004-2058  
Application No. 09/298,282

Throughout our opinion, we make references to the Appellants' briefs, and to the Examiner's Answer for the respective details thereof.<sup>1</sup>

### **OPINION**

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the Appellants and the Examiner, for the reasons stated *infra*, we affirm the Examiner's rejection of claims 1-3 and 5-6 under 35 U.S.C. § 103; and we reverse the Examiner's rejection of claims 4, 7-12, and 14 under 35 U.S.C. § 103.

Appellants have indicated that for purposes of this appeal, the claims stand or fall separately. See page 3 of the brief. However, Appellants have failed to meet the requirements of 37 CFR § 1.192 (c)(7) (July 1, 2002) as amended at 62 Fed. Reg. 53169 (October 10, 1997), which was controlling at the time of Appellants' filing of the brief. 37 CFR § 1.192 (c)(7) states:

*Grouping of claims.* For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included

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<sup>1</sup> Appellants filed an appeal brief on August 25, 2003, replacing the brief filed July 28, 2003. Appellants filed a reply brief on February 2, 2004. The Examiner mailed out an Examiner's Answer on December 2, 2003.

Appeal No. 2004-2058  
Application No. 09/298,282

that the claims of the group do not stand or fall together and, in the argument under paragraph (c)(8) of this section, appellant explains why the claims of the group are believed to be separately patentable. ***Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.*** (Emphasis added)

We will, thereby, consider Appellants' claims as standing or falling separately where arguments to separate patentability have been presented. Therefore, we will treat the claims as falling into the following groups:

Claims 1-3 and 5-6 as Group I;

Claim 4 as Group II;

Claim 7 as Group III;

Claims 8-11 as Group IV; and

Claims 12 and 14 as Group V.

We will treat:

Claim 1 as a representative claim of Group I;

Claim 4 as a representative claim of Group II;

Claim 7 as a representative claim of Group III;

Claim 8 as a representative claim of Group IV; and

Claim 12 as a representative claim of Group V.

If the brief fails to meet either requirement, the Board is free to select a single claim from each group and to decide the appeal of that rejection based solely on the selected representative

Appeal No. 2004-2058  
Application No. 09/298,282

claim. ***In re McDaniel***, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002). ***See also In re Watts***, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1457 (Fed. Cir. 2004).

**I. Whether the Rejection of Claims 1-3 and 5-6 Under 35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the invention as set forth in claims 1-3 and 5-7. Accordingly, we affirm.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a ***prima facie*** case of obviousness. ***In re Oetiker***, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). ***See also In re Piasecki***, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. ***In re Fine***, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. ***Oetiker***, 977 F.2d at 1445, 24 USPQ2d at 1444. ***See also Piasecki***, 745 F.2d at 1472, 223 USPQ at 788.

Appeal No. 2004-2058  
Application No. 09/298,282

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." *Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." *In re Lee*, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to independent claim 1, Appellants argue at page 5 of the brief, "Key clips are not the same as key frames" and "Appellants' specification defines key clips to be different from key frames." We find this argument unpersuasive. Appellants have clearly defined key frames as a species of key clips at lines 1-3 of page 6 of their specification.

Appellants further argue at page 4 that, "Srinivasan is not key clip data, with regard to how key clips are now defined in Appellants' claim 1" and at page 5 that, "key clips are comprised of one of either at least one key event or at least one key object." We find this argument unpersuasive. Srinivasan clearly teaches a key clip comprised of a last touchdown (key event) at line 1 of column 29.

Appeal No. 2004-2058  
Application No. 09/298,282

Appellants argue at page 4 that, "Hanjalic does not use PSIP information for key clips, but uses it instead to identify key frames." We find this argument unpersuasive. While Hanjalic clearly does identify key frames using PSIP information, Hanjalic's Table 2 and section 5.2 show that this identification is done as part of identifying the segment (clip) which the key frame represents. As stated in section 5.2, "The key frame extraction routines provide icons able to represent the content of segments of video." Also, this section teaches that a "key\_frames" class is actually directed to a data set about a certain video sequence. The fact that Hanjalic teaches the additional step of extracting a key frame for each clip and chooses to label the object class, as a "key\_frame" class does not render Appellants' claimed invention patentable over the art.

Appellants argue at page 4 that, "claim 1 requires that the data service authoring subsystem author key clips, which is not shown, taught nor suggested by Srinivasan." We find this argument unpersuasive. Appellants provide no elaboration on this statement. We find that Srinivasan clearly teaches an authoring subsystem at item 51 of figure 7. Therefore, we must assume that Appellants are in fact arguing (as discussed above) that the claimed "key clips" differ from Srinivasan's clips. We have already found this argument to be unpersuasive. We further note



that Appellants present similar arguments throughout the brief. In these arguments it is impossible to tell if the argument is directed to showing that the cited reference a) fails to teach a claimed "function" or b) fails to teach a claimed "data type" processed by that function (i.e., while the cited reference performs the claimed function it does not do so on the claimed data type, therefore it fails to teach the combination comprising the "function performed on the claimed data type"). As Appellants have not specifically stated whether they are arguing a) or b), we will interpret all remaining arguments according to interpretation b).

Finally, Appellants argue at page 5 that the references fail to teach "a format that allows customization at the receiver." We find these arguments unpersuasive. We find this limitation to be broad in the extreme. The plain language of the claim merely requires that the format not prohibit customization of some form at the receiver. We find that this broad limitation is taught by the references for the reasons set forth in the Examiner's rejection.

Appellants' arguments with respect to claims 2-3 and 5-7 are restatements of the arguments directed to claim 1 or merely incorporate the arguments directed to claim 1. These arguments

Appeal No. 2004-2058  
Application No. 09/298,282

are unpersuasive for the reasons discussed above with respect to claim 1.

Therefore, for the reason above, we will sustain the Examiner's rejection under 35 U.S.C. § 103.

***II. Whether the Rejection of Claim 4 Under 35 U.S.C. § 103 is proper?***

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claim 4. Accordingly, we reverse.

With respect to dependent claim 4, Appellants argue at page 6 of the brief, the video reference generator that generates references to key clips is not taught by the reference. We find these arguments persuasive.

To determine whether claim 4 is obvious over the references, we must first determine the scope of the claim. Appellants' specification shows a video reference generator is defined at page 12, lines 4-22, as requiring the return of a descriptor that includes the "Local Time Reference" and the "PCR Reference." Appellants argue that "video reference generator" should be narrowly defined as shown at page 12. Where applicant acts as his or her own lexicographer to specifically define a term of a

Appeal No. 2004-2058  
Application No. 09/298,282

claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. **Process Control Corp. v. HydReclaim Corp.**, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning. **See In re Paulsen**, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994). Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. **Toro Co. v. White Consolidated Industries Inc.**, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the specification and drawings"). Any special meaning assigned to a term "must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention." **Multi-form**

Appeal No. 2004-2058  
Application No. 09/298,282

***Desiccants Inc. v. Medzam Ltd.***, 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998).

Upon our review of Appellants' specification, we find a definition of the term "video reference generator" that is different from the ordinary meaning. Therefore, we find that the meaning of the term "video reference generator" requires the return of a descriptor that includes the "Local Time Reference" and the "PCR Reference."

We appreciate the Examiner's position that "video reference generator" is met by a number/time marker-generator module (answer at page 7). However we find that the claim language requires the return of a descriptor that includes the "Local Time Reference" and the "PCR Reference."

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

***III. Whether the Rejection of Claim 7 Under 35 U.S.C. § 103 is proper?***

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claim 7. Accordingly, we reverse.

With respect to dependent claim 7, Appellants argue at page 8 of the brief, "[t]he combination of references does not address the inclusion of a defined format." We find this argument persuasive. We note that claim 7 requires that the format be a universal format that covers both event and object based content identification. Appellants' specification clearly teaches two methods of content identification (event or object) and use of a single format to cover both (specification at page 9). While we find that the references teach event content identification, we also find that the references do not teach using a single format to cover both event and object based content identification.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

**IV. *Whether the Rejection of Claims 8-11 Under 35 U.S.C. § 103 is proper?***

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 8-11. Accordingly, we reverse.

To determine whether claim 8 is obvious over the references, we must first determine the scope of the claim. Appellants argue that an "inference engine" is not taught by the references.

Appeal No. 2004-2058  
Application No. 09/298,282

Our reviewing court states in ***In re Zletz***, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) that "claims must be interpreted as broadly as their terms reasonably allow." Our reviewing court further states, "[t]he terms used in the claims bear a 'heavy presumption' that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art." ***Texas Digital Sys. Inc v. Telegenix Inc.***, 308 F.3d 1193, 1202, 64 USPQ2d 1812, 1817 (Fed. Cir. 2002), ***cert. denied***, 538 U.S. 1058 (2003).

Upon our review of Appellants' specification, we fail to find any definition of the term "inference engine" that is different from the ordinary meaning. We find the ordinary meaning of the term "inference engine" is best found in the dictionary. We note that the definition most suitable for "inference engine" is "the part of a rule-based expert system that makes logical inferences or decisions."<sup>2</sup>

We appreciate the Examiner's position that "inference engine" is met by a Sezan's "knowledge-based system." However, we find that the claim language requires a specific type of knowledge-based system that includes an inference engine and such is not taught by the references.

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<sup>2</sup> The Artificial Intelligence Dictionary, 1991, page 157. Copy provided to Appellants.

Appeal No. 2004-2058  
Application No. 09/298,282

Appellants also argue at page 10 that the Examiner has not set forth a proper rationale as to why it would have been obvious to use both a short-term memory and a long-term memory. We agree. The Examiner has not explained why an artisan would look at the data storage unit 50 of Sezan and find it obvious to break this single unit into short-term and long-term components. Rather, the Examiner has set forth why the unit 50 could be used for both types of storage. This is not what was claimed.

We have reviewed Appellants' other arguments with respect to claims 8-11 and do not find those arguments persuasive for the reasons set forth by the Examiner at pages 9-10 of the answer. We also point out that Appellants' argument that Sezan fails to teach references to key clips was particularly unpersuasive. Appellants cite Sezan at column 16, lines 15-35, to support their argument, yet fail to cite lines 64-67 of the same column which support the Examiner's position.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

**V. *Whether the Rejection of Claims 12 and 14 Under 35 U.S.C. § 103 is proper?***

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill

Appeal No. 2004-2058  
Application No. 09/298,282

in the art the invention as set forth in claims 12 and 14.

Accordingly, we reverse.

With respect to dependent claim 12, Appellants argue at page 13-14 of the brief that the references fail to teach an inference engine. We find this argument persuasive for the reasons discussed above with respect to claim 8.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

#### ***Conclusion***

In view of the foregoing discussion, we have sustained the rejection under 35 U.S.C. § 103 of claims 1-3 and 5-6; and we have not sustained the rejection under 35 U.S.C. § 103 of claims 4, 7-12, and 14.



Appeal No. 2004-2058  
Application No. 09/298,282

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

**AFFIRMED-IN-PART**

LEE E. BARRETT

LEE E. BARRETT  
Administrative Patent Judge

Howard B. Blankenship

HOWARD B. BLANKENSHIP  
Administrative Patent Judge

Allen MacDonald

ALLEN R. MACDONALD  
Administrative Patent Judge

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## in·duc·tive learn·ing

A kind of generalization learning consisting of the ability to detect and identify a pattern or sequence and then produce a number, symbol, event, or other object that exemplifies it. The object may be, for example, a new rule or the next movement of a dynamic object. Inductive learning may also be used to predict such things as the next card or next event, or future data based on a set of statistics accumulated over time.

Also see *generalization*; *induction*.

## in·fer·ence

*n.* The drawing of a conclusion whose truth follows from the truth of a given premise, statement, or proposition.

### (Logic)

The process of proving a theorem or arriving at a truth by applying various rules with which one may derive or create new truths from existing or already proven truths. The method of problem solving used in rule-based expert systems, performed by what is called an inference engine.

Also see *expert system*; *inference, rules of*; *rule-based system*; *truth*.

### (Statistics)

The drawing of generalizations from the analysis of sample data.

## in·fer·ence en·gine

### (Expert systems)

The part of a rule-based expert system that makes logical inferences or decisions. It uses the rule or knowledge base embodying domain knowledge and the expert's decisionmaking process.

Also see *expert system*; *inference*.

## in·fer·ence, rules of

### (Logic)

Rules for deriving truths from stated or proven truths, in the form

$$A \rightarrow B$$

meaning that A implies B (or B is inferred from A), but B does not necessarily imply A. This may also be stated in the form IF-THEN,

IF A is true, THEN B is also true

Among the basic rules of inference used in artificial intelligence are:

# The Artificial Intelligence Dictionary

Ellen Thro

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